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(56) Documents cited
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(54) Tractor operated scrummaging machine

(57) This is a scrummaging machine that goes behind a tractor so that the practising scrum push the tractor along.
The machine consist of pads 13 for the opposition scrum to push against; these pads are spring loaded. The spring system is mounted inside the box section, 11 this is welded to the main frame 10. On this frame hitches 14 are connected so that the machine can connect to the tractor's normal three point linkage system.

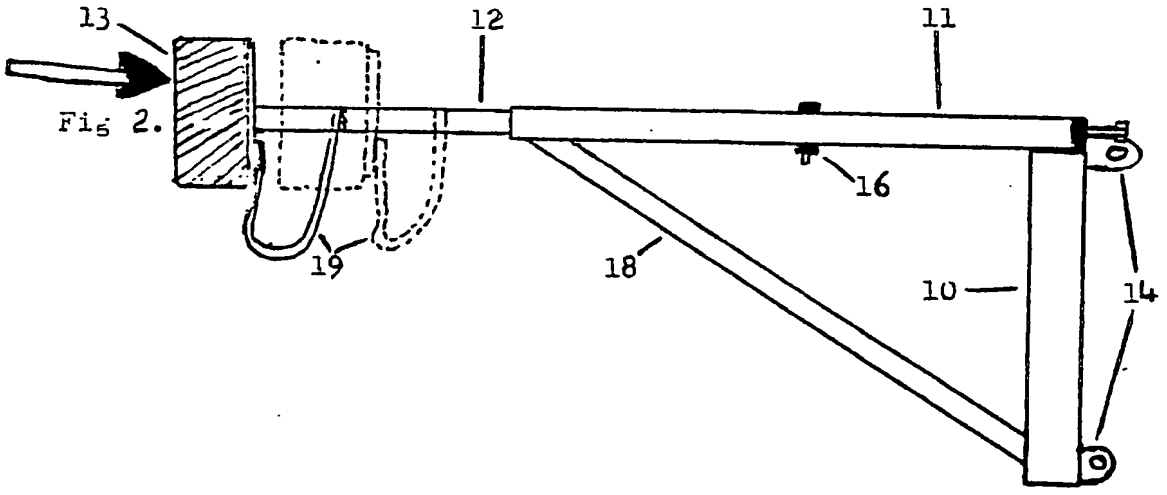

Fig 2.

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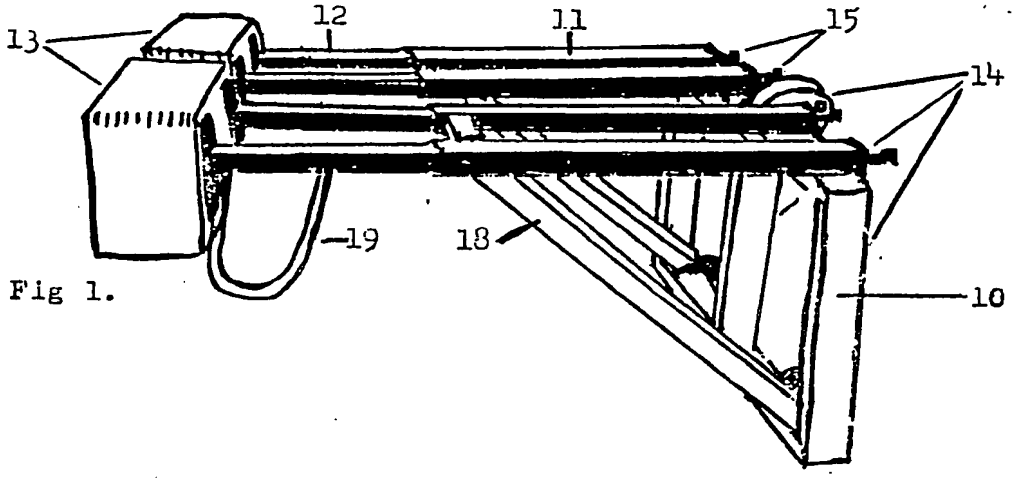

Fig 1.

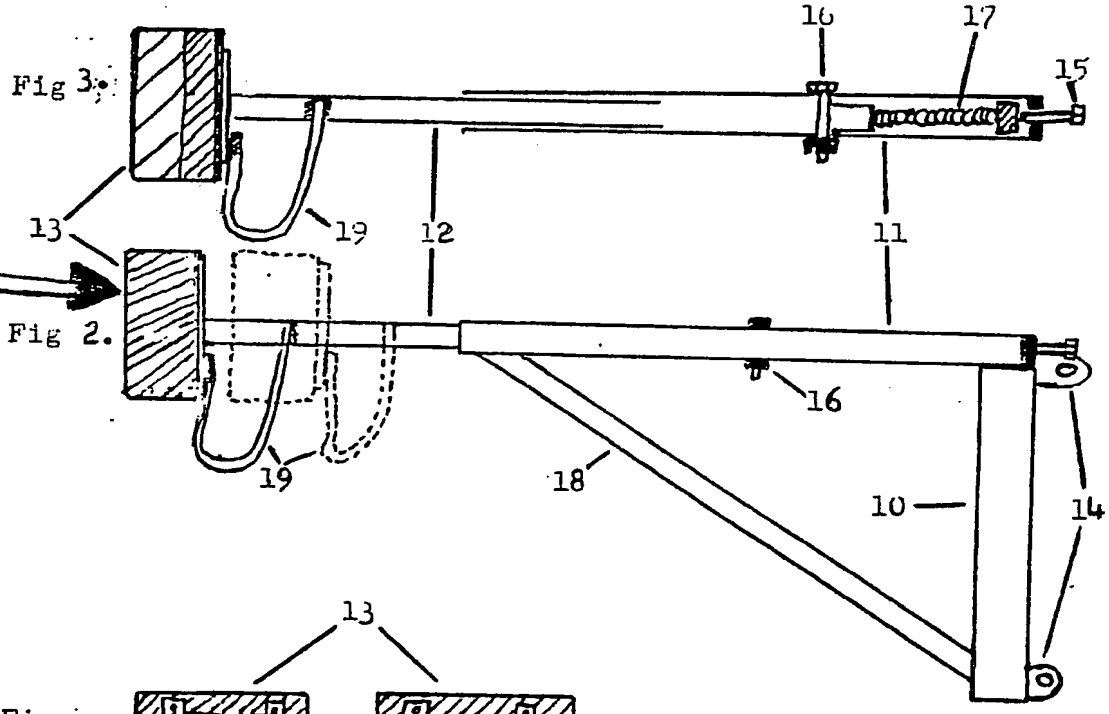

Fig 3.

Fig 2.

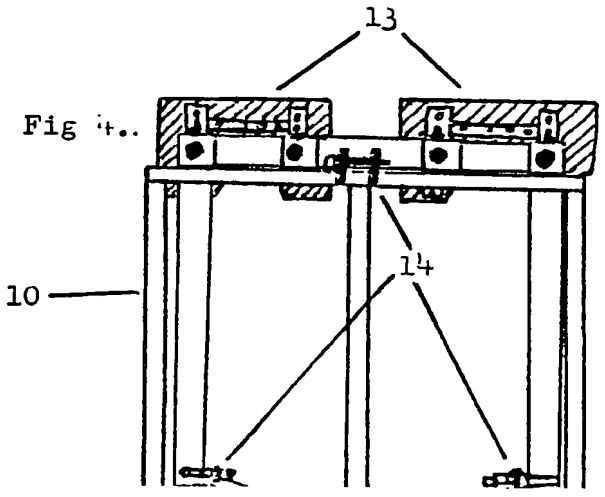

Fig 4.

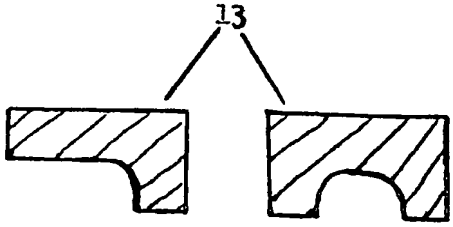

Fig 5.

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TRACTOR OPERATED SCRUMMAGING MACHINE

This invention relates to a scrummaging machine (for rugby practise) that is connected to a tractor.

Scrummaging machines are quite common in the rugby world.They are devices that enable a rugby team pack to practise scrummaging techniques without having an oposition to complicate the situation.
Scrummaging machines normaly consist of: pads for the scrum to push against,sometimes sprung to allow give, and a system of getting friction with the ground so that the scrum can push against it.

Scrummaging machines however tend to be expensive compared to the budgets of schools and rugby clubs.They also tend to be large structures that are difficult to be stored easily and so weather quickly.They also tend to cause extensive damage to the grounds by pulling the turf up.

The present invention is a simple metal frame on which the pads are connected these pads are spring loaded using springs that are hidden inside the structure.The structure has an A frame linkage system incorporated to allow it to be hitched to any standard tractor.

A discription of the scrummaging machine will now be given refering to the diagrams on the accompaning pages.

Figure 1 shows a persective view of the scrummaging machine with the pads to pionting forward.

Figure 2 shows the the scrummaging machine from the side with the postion of the pads shown as normal and the position when pressure is applied.

Figure 3 shows a cross section to show the inside of the system.

Figure 4 shows the machine from behind,the hitch positions can be seen.

Figure 5 shows the shape of the pads loking straight at them.

Referring to the diagrams, the tractor's three point linkage hitches to the brackets 14,these brackets are welded to the main frame 10. The pads are spring loaded,the springs are contained in the box section 11 which is welded to the main frame and has supports 18 that come from the bottom of the main frame 10 to the end of the box 11.There is a bolt 15 that can adjust the springs 17 tension. The actual pads are connected to a smaller size box section 12 that fit inside the larger box 11 and rests agianst a the spring,the pads can be pushed in but will not fall out because of the bolt 16 which fits into a groove that is milled into box section 12.

The pads 13 are made up of two sorts of foam,the outer one is soft and the inner foam is denser, these are glued onto a plywood backing, this is then screwed to the thin metal bar which is welded to box section 12.The foam is surrounded by a durable water proof cover.Also welded to box section 12 is 19 which is a metal bar which acts as a binding piont for the props to hold onto.

The shape of the pads is shown in figure 5, this shape is of conventional design that represents the opposition pack.

When the scrummaging machine is pushed against the pads spring inwards, the new position can be seen in figure 2 and is represented by a dotted line.

CLAIMS

1. A scrummaging machine that is connected to a tractor does not have to be a heavy bulky structure but can be very small and light-weight because the tractors own weight provides the opposing force to push agianst.This would allow the scrummaging machine to be stored inside so that it can not be vandalised (also preventing weathering) with the scrummaging machine being hitched onto the tractor for use it is easy to transport it to a storeage shed.

2. The tractor allows several operations to take place:

a) The height of the scrum can be altered by adjusting the hydraulics on the tractor.

b) The resistance of the tractor to being pushed can be altered by simply changing the hand brake setting.

c) If the steering wheel is turned on the tractor then the effect is that of a "wheeling" opposition scrum.

d) By using a standard screw adjustment on the hydraulics of the tractor one arm can be lowered or raised so that the height of the machine can be lower on one side of the scrum than it is on the other,this is very realistic.

3. To aquire all the benefits listed in claim 2 the normal scrummaging machine would have to be very large and expensive.This design will be small,cheap,effective and make more use of existing school or rugby club tractors that are used by grounds staff.

4. The spring loaded pads allow a "snap shove" to be practised without pain to the props.The springs are also hidden away leaving a tidy clean appearance.The tension on the springs can be adjustec before the pack starts to push.The springs used are 1 inch diameter 1 foot long compression springs.

5. The pads on the scrummaging machine are specially designed to have a section above the neck to allow the props to push upwards as well as forwards.These pads are also availaible in a smaller size but with extra padding for younger rugby players.

Amendments to the claims have been filed as follows

1. A machine that is connected to a tractor does not have to very large bulky structure like most scrummage machines, but is small and light because all resistance force is provided by the tractor. This also means that the machine is very easy to store inside.

2. The tractor gives the scrummaging machine several advantages:

By using the tractors hand brake the resistance to being pushed can easily be adjusted.

By turning the steering wheel of the tractor the scrummaging machine will simulate a "wheeling" scrum.

By raising or lowering the hydraulics the scrummaging machines height can be adjusted.

Because the scrummaging machine is mounted on the hydraulics it is able to swing slightly to the left or right making the props concentrate on their stability and foot positioning.

By using a screw adjustment on the hydraulics one side of the machine can be raised or lowered simulating a real scrum.

Tractors have two brake pedals one for either rear wheel, some by pressing one pedal at a time the position of the opposing force changes.

It can be moved to different parts of the ground thus preserving the turf. It can also be transported to and from a storage shed.

3. The pads of the machine are spring loaded so that a "snap shove" can be practiced.The springs from the pads are hidden away out of sight so that it looks tidy and is clean.By turning a bolt the tension on the spring can be adjusted before the pack start pushing.

4. There is a section above the neck on the pads allowing the pack to push upwards. Also on the left hand side there is no left shoulder support as in a real scrum.

5. The rucking pad is contained very tidily in the scrummage machine and can be used by simply folding it down. All of the properties that are caused by the tractor apply to the rucking machine as well as the scrummage machine.

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